

AMENDMENTS

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

Listing of Claims:

1. (Previously Presented) A pixel structure comprising:
a semiconductor substrate;
a radiation sensitive source of carriers in the substrate;
a region in the substrate for collecting but not storing the carriers;
at least one doped or inverted region of a first conductivity in or on the substrate;
and
at least one planar current flow, carrier transport pathway from or through the region in the substrate for collecting but not storing carriers, to the at least one doped or inverted region, in which carrier transport pathway carriers are not stored, there being no means for storing carriers in between the region for collecting but not storing carriers and the at least one planar current flow, carrier transport pathway, wherein substantially all of the region for collecting but not storing carriers is under a polysilicon gate electrode.
2. (Withdrawn) The pixel structure according to claim 1, wherein the non-carrier storing, carrier collecting region has a concentration so low that it is in normal use always depleted.
3. (Withdrawn) The pixel structure according to claim 2, wherein at least part of the non-carrier storing, carrier collecting region is a pinned or buried diode.
4. (Withdrawn) The pixel structure according to claim 1, wherein the non-carrier storing, carrier collecting region is substrate under a covering oxide layer.
5. (Withdrawn) The pixel structure according to claim 1, wherein the non-carrier storing, carrier collecting region is substrate under a field oxide layer.

6. (Canceled)

7. (Previously presented) The pixel structure according to claim 1, wherein the region for collecting but not storing carriers is diffusion limited.

8. (Previously presented) The pixel structure according to claim 1, further comprising at least one implant confining the region for collecting but not storing carriers along at least one dimension thereof.

9. (Previously presented) The pixel structure according to claim 1, further comprising regions of a second conductivity type in or on the substrate avoiding touching of the region for collecting but not storing carriers and a field oxide.

10. (Original) The pixel structure according to claim 1, wherein the pixel is MOS-based.

11-24. (Canceled)